Human Systems Integration / Learning Management System

HSI/LMS Program Vision

NAVSEA, Keyport

NDIA Conference

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Today’s Discussion

- Introduction
- Goal
- Challenges
- Process Review
- Wrap-up

Introduction

- Naval Undersea Warfare Center Division Keyport
  - Provides Test and Evaluation; In-service Engineering, Maintenance, and Repair; Fleet Readiness, and Industrial-base Support for Undersea Warfare Systems, Countermeasures, and Sonar Systems
- Aircraft Carrier Tactical Support Center (CV-TSC)
  - Component of Advanced Combat Direction System (ACDS) required to support the Undersea Warfare (USW) mission
  - NAVSEA Keyport Supports CV-TSC Cradle to Grave
- NAVSEA Keyport Roles Provides Foundation to Develop Comprehensive Knowledge Management System
  - Program Initiative: Enhancing Knowledge Transfer & Ensuring Learning Delta Available at Time of Alteration

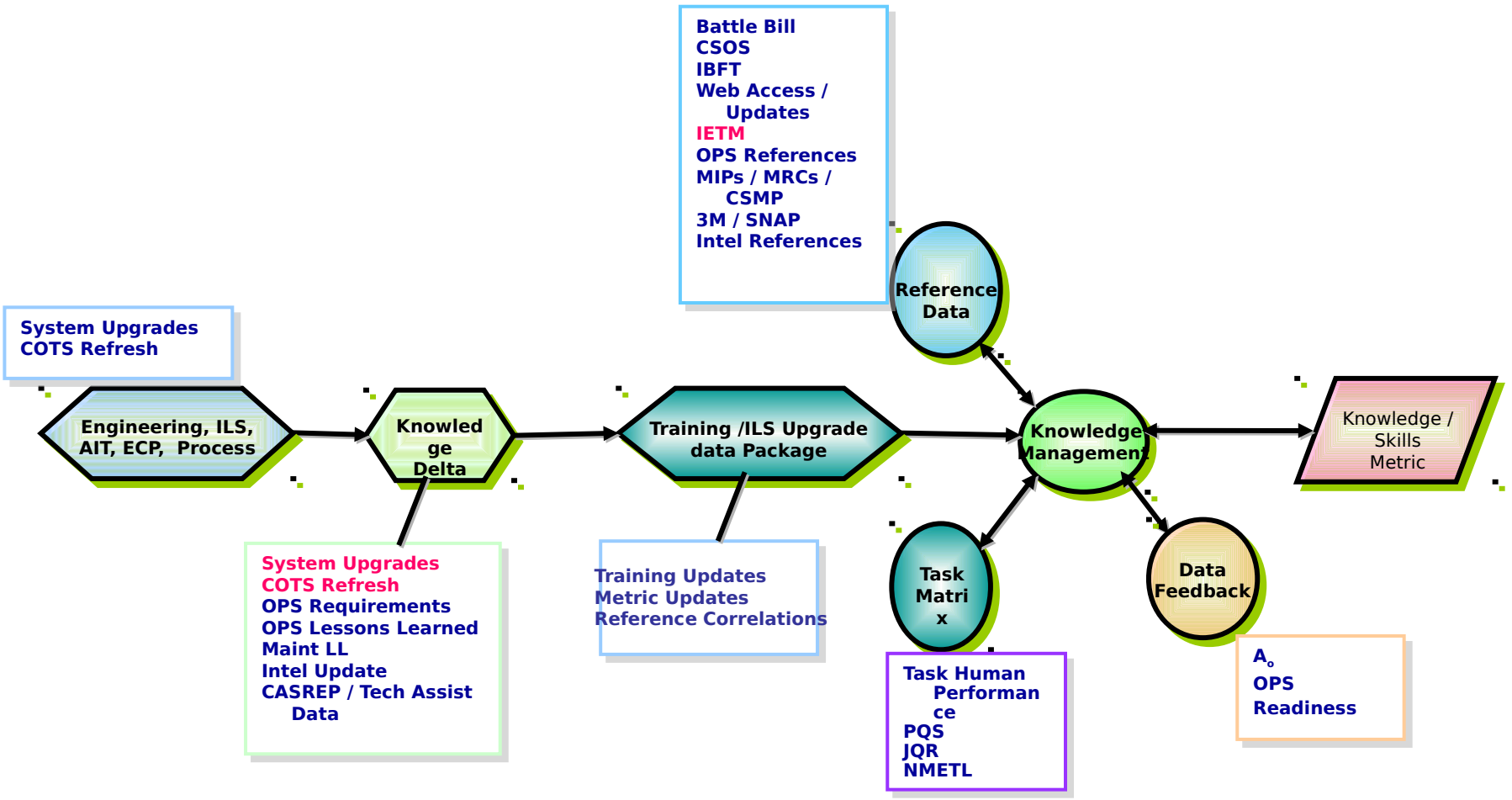
Goal

- Provide Fleet With the Situational Awareness Required
  - Real Time Delivery of Time Sensitive Knowledge / Skill Sets
  - Maintain War-fighting Competencies
  - Enable Fleet Self-Sufficiency, ISO SEAPOWER 21, & Surge Readiness Initiatives
  - Align Systems Development / Support With HSI Concepts
- Design Fully Integrated Knowledge / Skill Set Processes
  - Hardware / Software Engineering
  - Supportability
  - Training
- Standardize Data Exchange With Integrated HSI Methodologies
- Ensure HSI Processes Are DoD 5000 Compliant

Challenges

- Current Engineering Deliverables Provide Standard ILS Products
- Some Products May Not Be Delivered Concurrently
- Availability of Key Personnel During Product Delivery
  - Precludes Comprehensive Knowledge Transference
  - Limits number of Sailors Responsible for Assimilating the Data
- Chain of Command Situational Awareness Limited
- New Capability Knowledge Transference suffers
- Knowledge Transference during Crew Rotation Unstructured

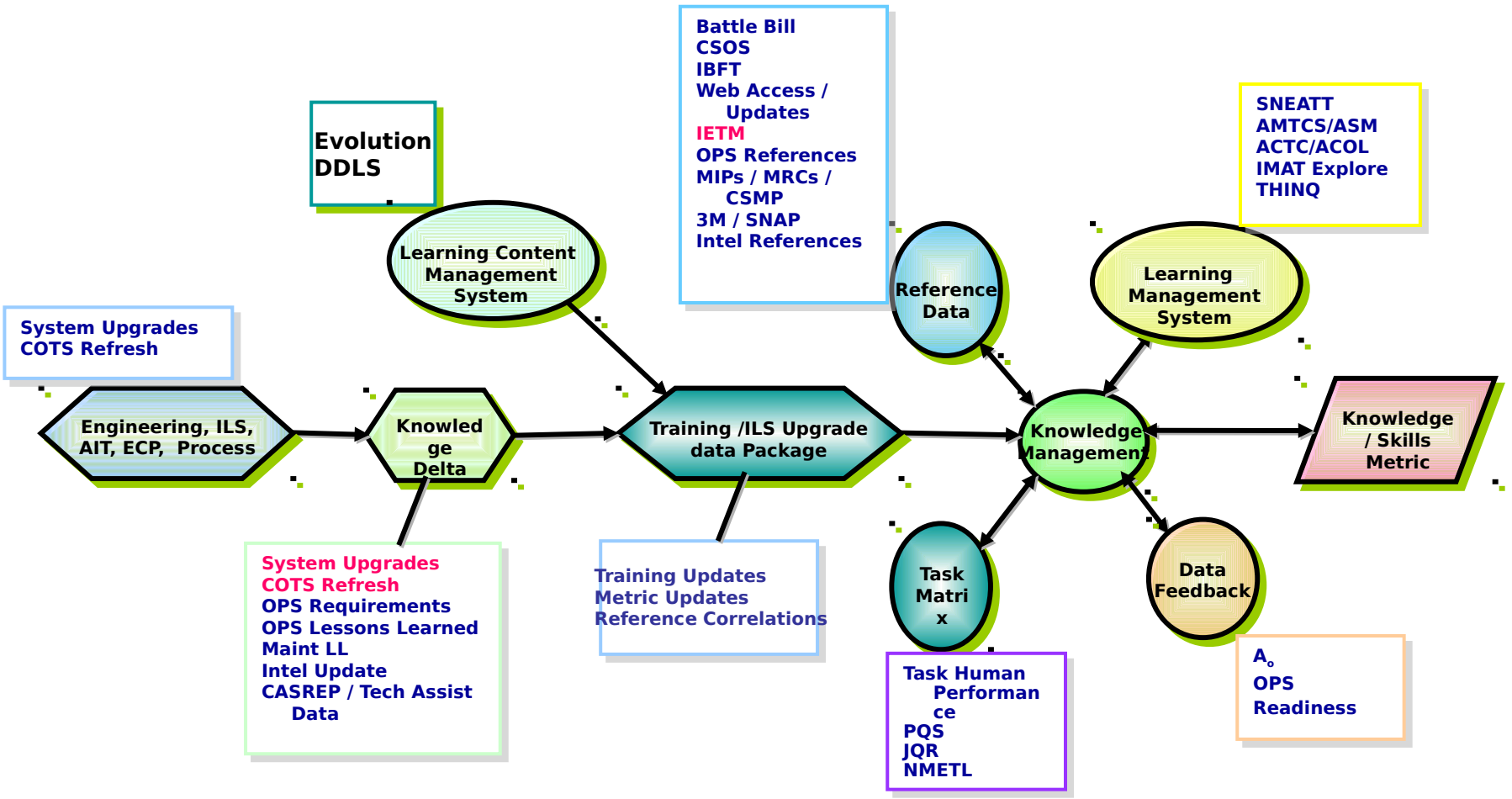
Current Environment



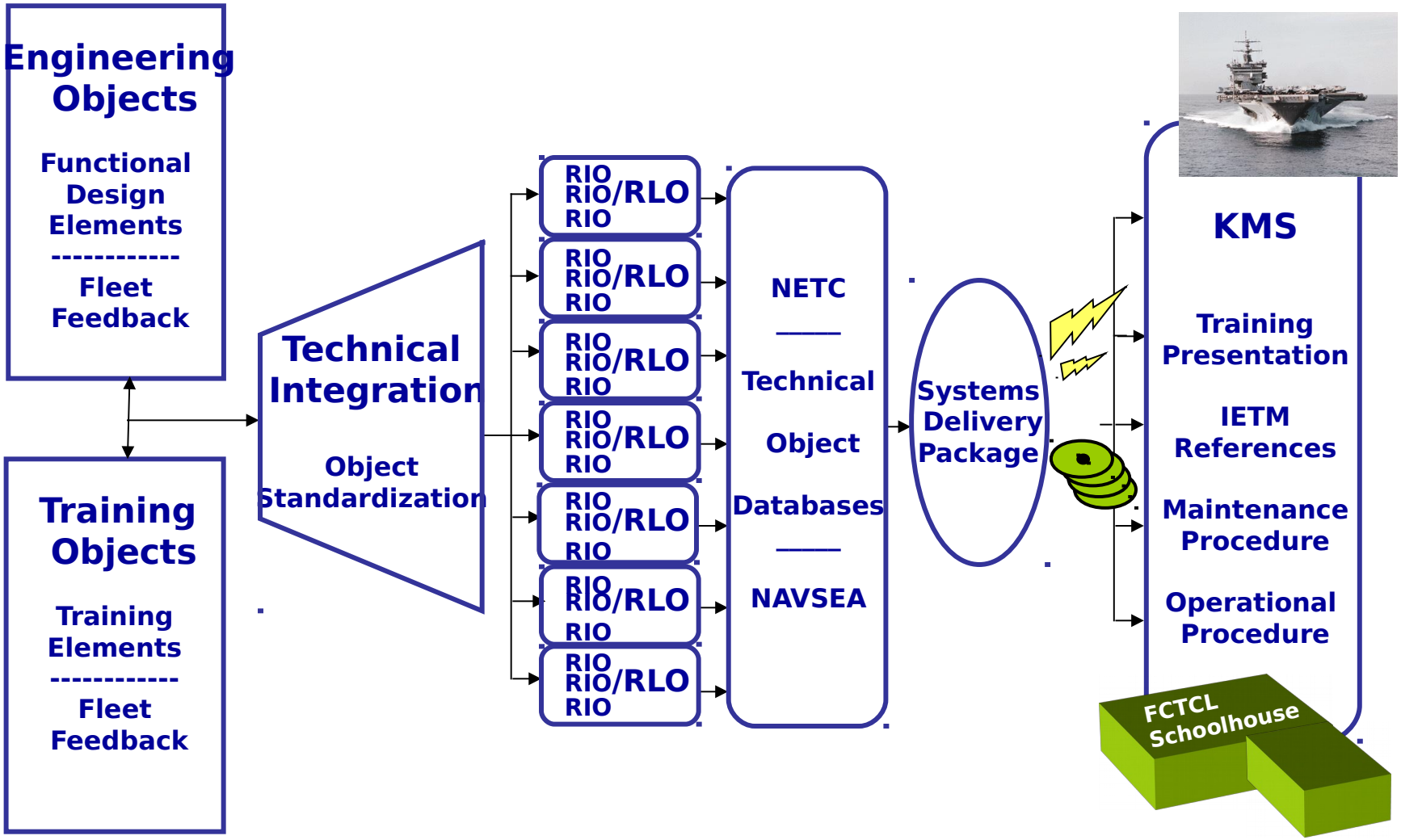
Process Change

- Need Responsive Knowledge Management Program
  - Enable Dynamic Fleet Readiness Initiatives
  - Support Dynamics of today's COTS Environment
  - Establish Foundation for Continuous HW / SW Evolutions (Moore's Law)
  - Align with Evolving Big Navy Training Initiatives
- Systems Engineering Products Create Knowledge Deltas (△)
- Provide Comparable Training Information
- Provide Dynamic, User Friendly Knowledge Management System
- Provide Awareness & Tracking of Deltas As They Occur

Future Environment

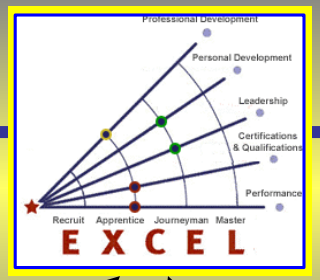


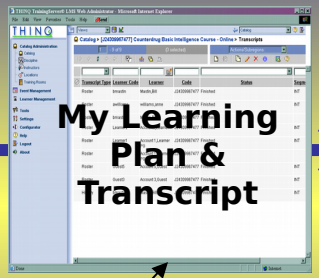
CV-TSC ILE/HSI



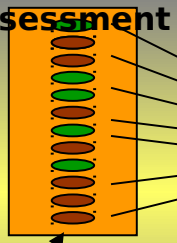
Integrated Learning Environment

Sailor View

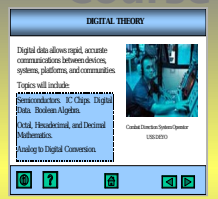


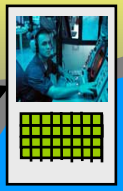


Pre-Assessment



My Course





PDA

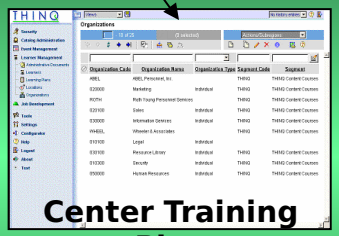
NKO

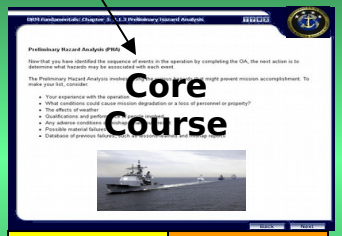
NTMPS | LMS | LCMS | Tech Data Repository

JMETL
NMETL
Group Task
Unit Task
Rating
Job Task

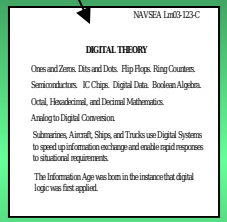
Skill Object
- Tasks
- Knowledge
- Skills / Abilities
- Standard
- Tools

Other Communities
Command
Division
Work Center





Skill Object | SIMs & RLOs

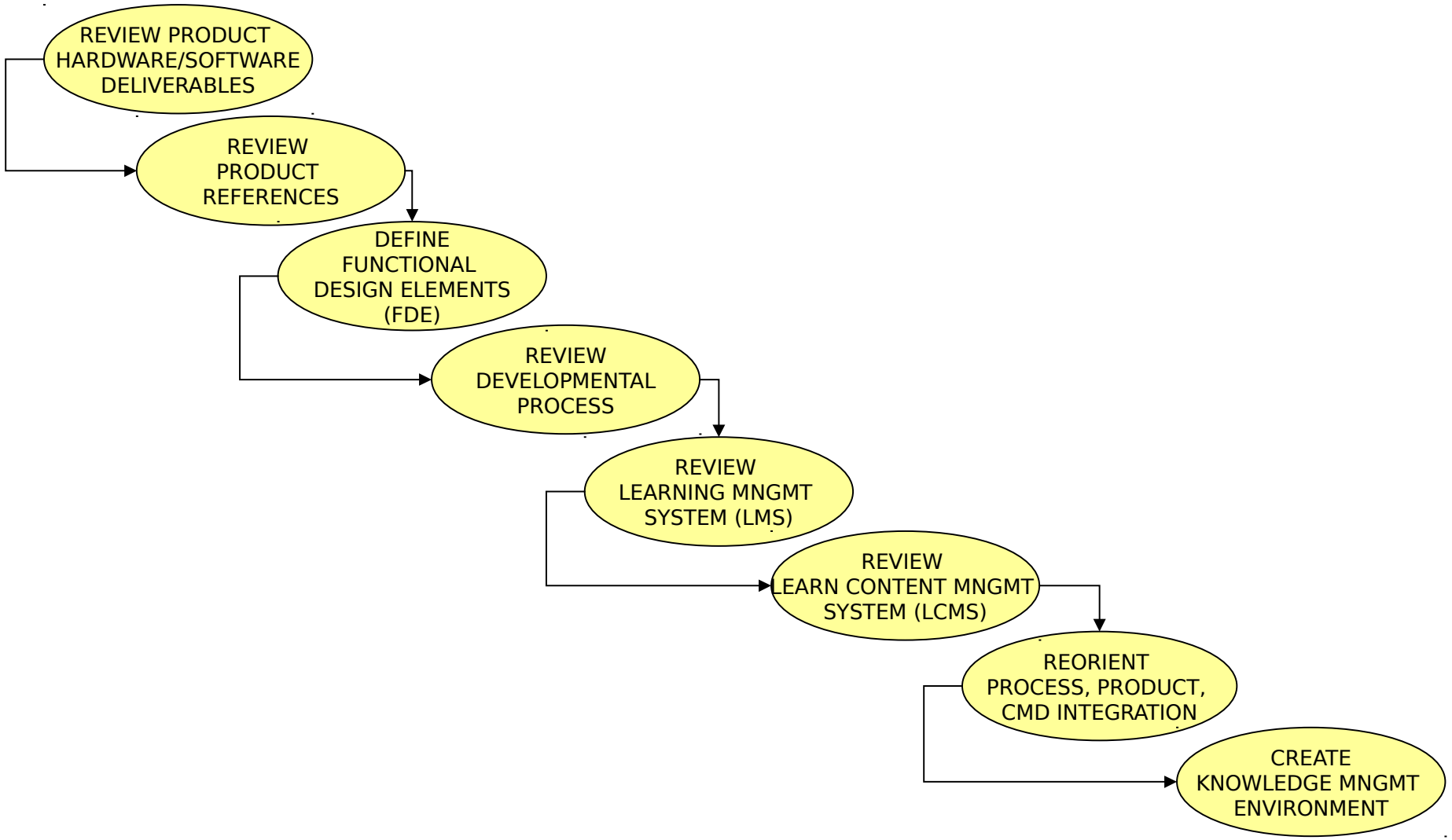


SYSCOM

Source: http://Navy Knowledge OnLine

ILE Implementation

Analysis Process


REVIEW PRODUCT HARDWARE/SOFTWARE DELIVERABLES
REVIEW PRODUCT REFERENCES
DEFINE FUNCTIONAL DESIGN ELEMENTS (FDE)
REVIEW DEVELOPMENTAL PROCESS
REVIEW LEARNING MNGMT SYSTEM (LMS)
REVIEW LEARN CONTENT MNGMT SYSTEM (LCMS)
REORIENT PROCESS, PRODUCT, CMD INTEGRATION
CREATE KNOWLEDGE MNGMT ENVIRONMENT

Analysis Conducted

- Reviewed Product Hardware / Software Deliverables
  - Tactical Combat System
  - Sensor Processing
  - Aircraft System Support
  - Embedded Training Support

- Reviewed Product References
  - IETM
  - COSAL
  - PMS Deck
  - Delta Training

Analysis Conducted

- Reviewed the Functional Design Elements (FDE)
  - Hardware Specs
  - Software Specs / Help Files
  - Console & Interconnect Drawings
  - Procurement / Supply / Logistic Info
  - Fleet Feedback Data, Etc

- Reviewed Developmental Process / Identify:
  - Raw Data Format
  - Data Format Changes Within Process
  - Bottlenecks
  - CM & QA Issues

ILE Tool Review

- Reviewed Learning Management Systems (LMS) Functional Capabilities

  SNEATT / LMS
  AMTCS / ASM
  ACTS / ACOL
  IMAT / IMAT On Line
  Big-Navy / Thinq

ILE Tool Review

- Reviewed Fleet CV-TSC LMS Requirements - Metrics
  - Dynamic Data Entry; Shipboard, TYCOM, SYSCOM
    - Correlate Ship ALT Knowledge Δ'S to Ship's Personnel
  - Track Finite Tasks, Perishability, Periodicity to Finite Task Specifics
  - Flag Tasks Not Achieved / Lost
  - Correlate Tasks to Skill-sets, Quals & Watch Station Hierarchy
  - Correlate Skills/Tasks Not Achieved to Unachieved Quals / Watch Stations

ILE Tool Review

- Reviewed Fleet CV-TSC LMS Requirements - Metrics (Con't)
  - Correlate Task Hierarchy to Operational Requirements, Watch Stations, Operational/Maintenance Standards & References
    - SOP, TRM, CONOPS, IBFT, NMETLS
  - Correlate Geographic Areas to Operational / Threat / Environmental Knowledge Requirements
    - Merger of Training & Operational Preparation
    - Tie Into Pre-subscribed ONI / Intel, Theater Echelon Data Sources
  - Dynamic Entry of PQS(s) Other Ships PQS
  - Tie Into NKO, Electronic Training Jacket
  - Print Capable, Dynamic Reports

ILE Tool Review

- Review Fleet CV-TSC LMS Requirements - Training Capabilities
  - Cross Reference CMI to Metrics
  - Dynamic Lesson / Object Mod / Generation / Removal
    - TYCOM, SYSCOM, School, MTT, Ship (Limited)
  - Testing: Cognitive, Skill, Proficiency Skill Level Oriented
  - Access to Formal Schoolhouse Training
    - Pretest, Train to Tasks Failed in Pretest
    - Challenge Test Capability
    - Remediation Via Alternative Training Presentation / Connection to SME
    - Randomized Test Bank; Logical Distracter / Answer
  - Scenario Generation – TAC, Sensor Environment, Import / Exp Capability via: SYSCOM, Schoolhouse, TYCOM, Ship Ground Truth Data
  - Pause / Return to Logout (Time)
  - Tie Into Resources
    - IBFT, ONI, NKO, & Lessons Learned

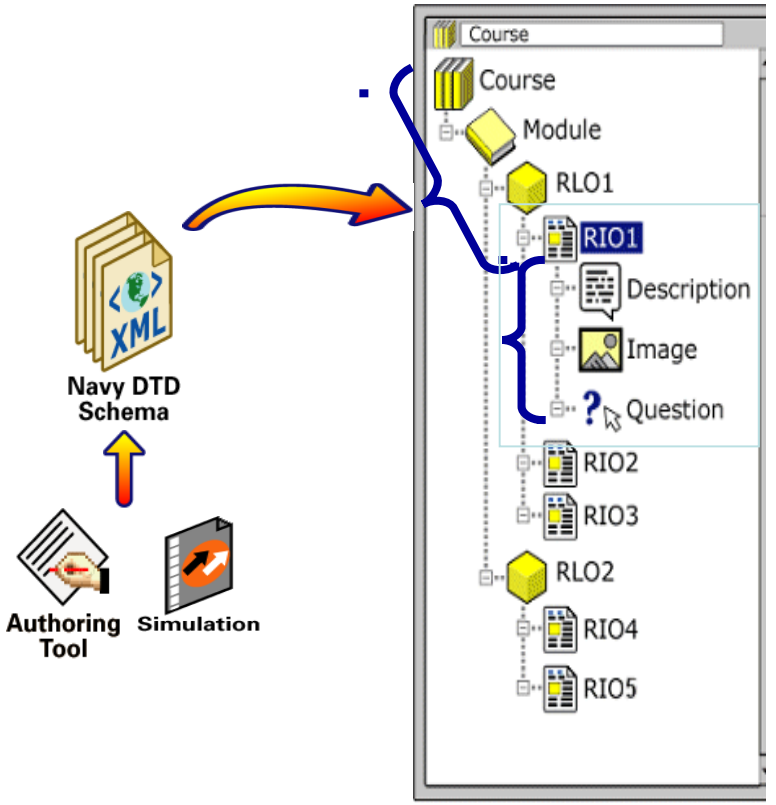
ILE Content

Legacy

Big Blob

Small Blob

ILE



Content Without Presentation, Navigation, or Delivery

Source: http://Navy Knowledge

ILE Tool Review

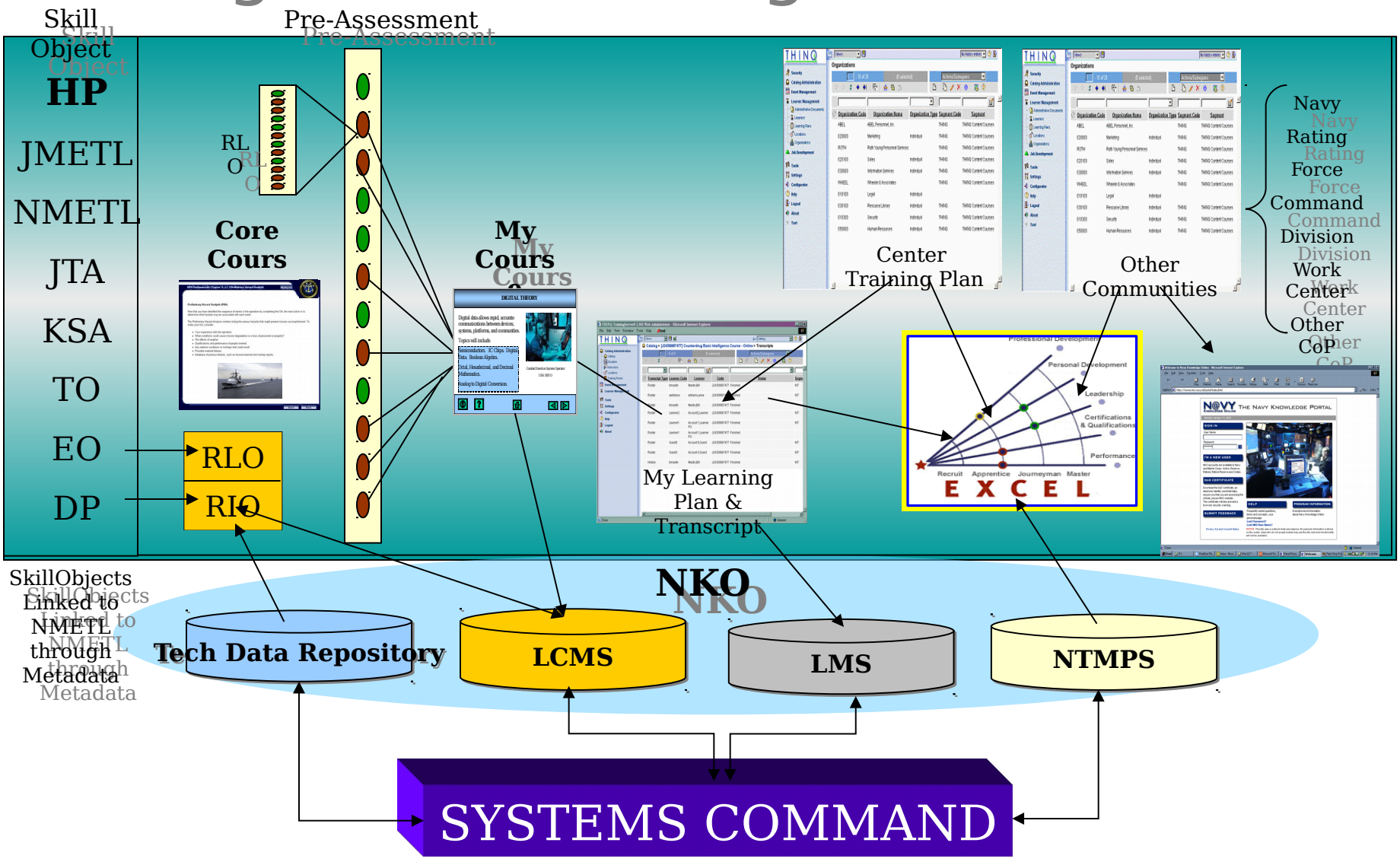
- Reviewed Learning Content Management System (LCMS) Functional Capabilities

  SNEATT / DDLS
  Big-Navy / Evolution

ILE Tool Review

- Reviewed CV-TSC Fleet LCMS Requirements
  - Data Base Maintained at SYSCOM
    - Collaborative Data Exchange With Big Navy Data Base
  - Dynamic Object / RLO Length COI Length
  - Import / Export, De-aggregate Other Object Based Curricula From Other Vendors
  - Tie Into Shipboard Metrics
  - Easy Modification of Legacy Objects
  - Assign Perishability to Objects

Integrated Learning Environment



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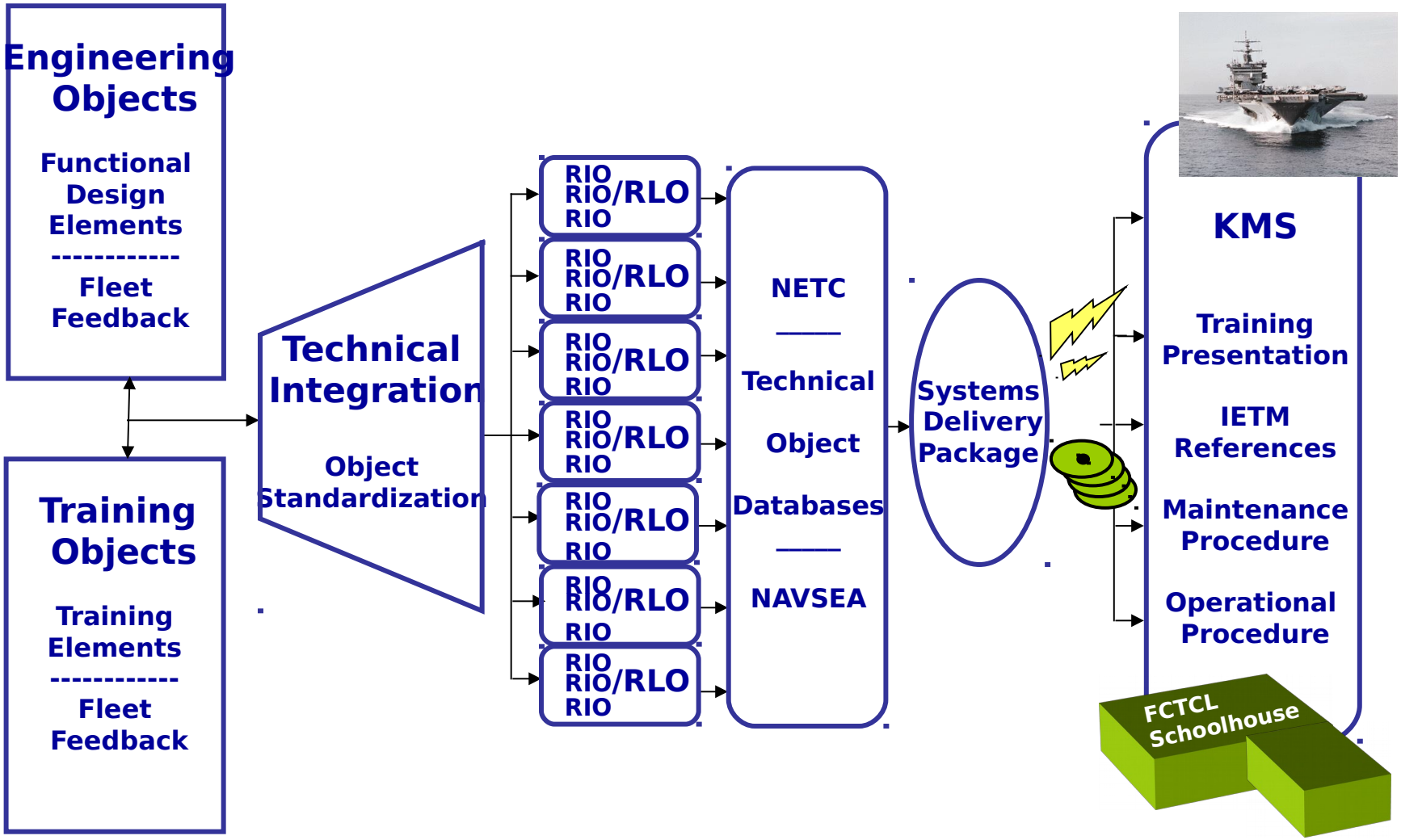
CV-TSC ILE/HSI



NKO Sea Warrior - Microsoft Internet Explorer

File Edit View Favorites Tools Help

N@VY KNOWLEDGE ONLINE

Welcome, Mark Martin

< Sailor >

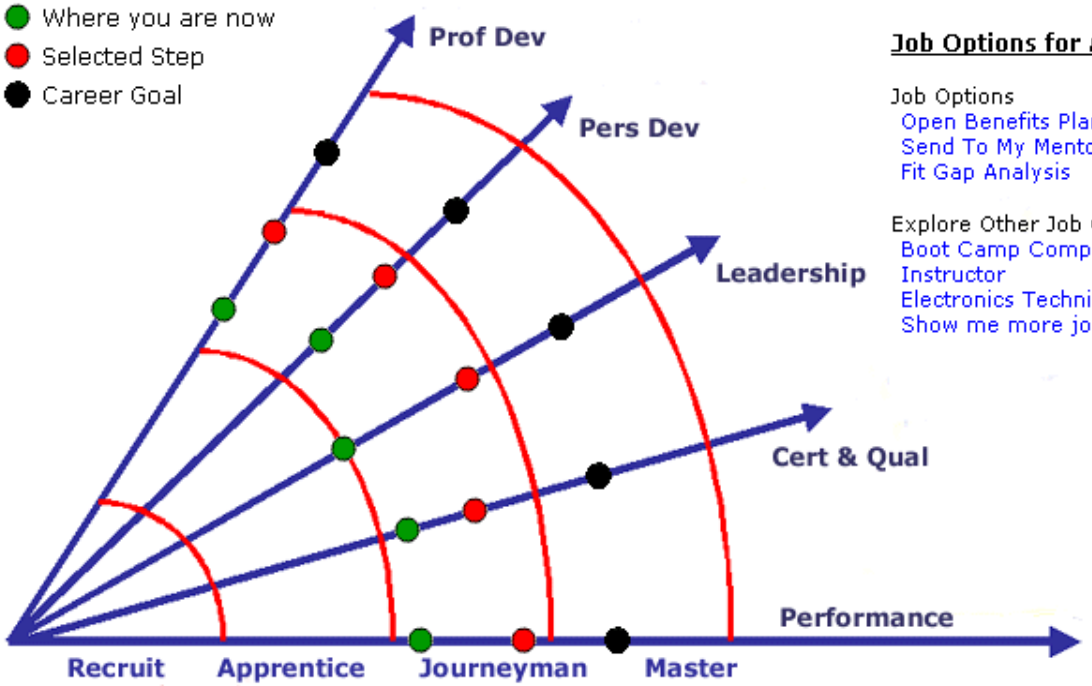
Home | Leadership | Pers Dev | My Center | Collaborate | My Page

Thursday 30. Jan 2003 - mark.martin is logged on

Site Search: Customize | User Guide | Logout

- SW Home
- Career Wizard
- Career Mapper
- Job Options
- Promotions
- Benefits Data
- Education Plan

Where you are now
Selected Step
Career Goal



Job Options for AT Work Center Supervisor

Job Options
- Open Benefits Planner
- Send To My Mentor
- Fit Gap Analysis

Explore Other Job Options
- Boot Camp Company Commander Instructor
- Electronics Technician
- Show me more job options

Recommended Best-Fit Path

Journeyman	Journeyman	Master	Master
AT Work Center Supervisor: Supervise the workcenter as LPO. Acquire leadership experience.	Quality Assurance Representative: Provides quality assurance functions and responsibilities for organizational and intermediate level maintenance activities. Consists of conducting, managing, and monitoring the quality assurance processes of the maintenance department.	Aviation Maintenance/Production Chief: Directs organizational and intermediate maintenance level on Naval aircraft, aircraft systems, aircraft engines, ground support equipment and Aviators life support equipment.	Aviation Maintenance Material Control Master Chief: Assists the Maintenance Material Control Officer in squadrons or Aircraft Intermediate Maintenance Departments in carrying out readiness responsibilities. Provides liaison between the Maintenance Material Control Officer and the Production Division supervisors.
More info Apply Through CMS Send to my mentor	More Info	More Info	

Career Goal

Grade	Fit	Prob
LDO	75%	80%
CWO	60%	90%
AVCM	60%	50%
Ln/Av Ofr	70%	60%

Other Options ETCM

Contact your mentor
More information

Done

Source: http://Navy Knowledge

Local intranet

CV-TSC KNOWLEDGE MANAGEMENT SYSTEM VISION

Log into

AW2 P. Active

Password:

Noneofyourbusiness

Maintenance

- Diagnostics
- PMS
- Remove/Replace
- System Administration
- NAVSEA

Training

- Metrics
- Training Applications
- SIM/STIM
- Collaborative Training
- ONI
- AAAT
- NAVSEA
- NKO

Use of this product implies proactive application of personal skills and knowledge in the support of mission requirements and the common defense of our nation. Caution: Continued use of this product will cause a prolonged increase in personal effectiveness, cognitive skills, and sensor to shooter response times.

Wrap-up

THANK YOU . . .

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. . . QUESTIONS